

**REMARKS**

Reconsideration of the above-identified application, as amended, is respectfully requested.

Applicants' acknowledge that the present Official Action dated April 21, 2004, is the result of the Examiner re-opening prosecution by nullifying the proposed allowance indicated by the Examiner on September 16, 2003. In the present Office Action, the Examiner indicated that the claims of record are given in applicants' amendment submitted January 17, 2003.

In the Office Action, the Examiner rejected Claims 6, 16-19, 21-32 and 34-41 under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Particularly the Examiner indicated phraseology in Claims 16 and 29 ("said common physical characteristic") that allegedly lacks proper antecedent basis and further, that claims 6, 21 and 34 depend upon canceled claims. The Examiner further rejected Claims 1-4, 6-19, 21-32 and 34-41 under 35 U.S.C. §103(a) as allegedly being obvious over U.S. Patent No. 6,408,278 to Carney et al. ("Carney") in view of U.S. Patent No. 5,781,650 to Lobo et al. ("Lobo").

In response to the 35 U.S.C. §112, applicants have amended each of Claims 1, 16 and 29 in a manner that obviates the rejection. Further, applicants have canceled Claims 6-7, 11, 21-22, 26, 34-35 and 39 which obviates the dependency problems of these claims and moots the rejection based on 35 USC §112, second paragraph.

With respect to the rejection of Claims 1-4, 6-19, 21-32 and 34-41 under 35 U.S.C. §103(a) as allegedly being obvious over Carney in view of Lobo applicants respectfully traverse.

Specifically, independent Claims 1, 16 and 29 are being amended to set forth the patentably distinct features of the invention that are neither taught nor suggested by the combination of Carney and Lobo.

Carney, while directed to a system for delivering out-of-home programming to networked display devices relies on the tracking of demographic data by place and time so that the programming content can more closely conform to the changing demographic. Respectfully, "demography" is defined as the science of vital statistics, as of births, deaths, marriages, of populations etc. (Webster's New Universal Unabridged Dictionary, 2<sup>nd</sup> Ed., 1983, p. 483) and "demographic" means pertaining to demography. Thus, the demographic data tracked in Carney appears to rely on a pre-determined statistical probability that a certain place and time will have a specific demographic make-up. This is the limitation of Carney as there is provided no real-time group advertisement optimization mechanism for generating an advertisement based on an instantaneously changing demography. That is, Carney relies on a statistical make-up, i.e., data known ahead of time or "tracked" concerning a particular demographic make-up of a location. For example, in Carney, an airport terminal having passengers intended to a destination "D" at known times will cause the blanket generation of an advertisement related to destination "D" at those times. As another example, in Carney, advertisements will be targeted to an age group based on the fact that a shopping mall may have a large population of school age children on weekday afternoons while at evenings and weekends the demographic make-up at the mall changes to more complete families (See Carney at col. 5, lines 45-55).

While Carney mentions the ability to provide rapid feedback, for example, by implementing use of a visual camera that may capture an audience, its processing only goes so far as to determine a probable demographic "make-up" of the audience from a single image.

Lobo has been applied by the Examiner, for example, to bolster Carney's ability to determine only an "age" demographic make-up of a group from individual faces captured in a digital image.

Thus, the combined teachings of Carney and Lobo speak to the ability to determine an "age" demographic of an audience based on a captured visual image, and presumably may target an advertisement directed to the members of the prevalent age group. Carney does not teach or suggest how to "optimize" an advertisement based on personal characteristics of the people obtained from an image such as their 1) physical attributes (e.g., hair color), and/or 2) their behavioral activities (e.g., smoking) as in the present invention as will be explained hereinbelow.

Moreover, the only "optimization" discussed in Carney is with respect to moving inventory at locations known to have excessive amount of products/services for sale, whereby Carney will generate advertisements for those products/services at display locations proximate the location having excessive inventory (See Carney at Col. 7, lines 51-63).

Respectfully, the present invention, as claimed in amended Claims 1, 16 and 29, distinguishes over Carney in that the present invention relies not only on demographic data of an audience by statistical or tracked demographic patterns, e.g., age, gender, etc., but also on personal characteristics of people in the group including their: 1) identities, 2) physical attributes (e.g., hair color), and/or 3) their real-time behavioral activities (e.g., smoking or drinking beer) that is independent of the location. The present invention is directed to a real time system for dynamically generating an advertisement optimized for two or more persons located at a public location. The novel elements of the system includes provision of:

a means for obtaining real-time visual images, biometric data, and transaction data of members of a group of people while engaged in a common activity at a public location and generating the optimized advertisement, which is not shown or described in the Carney reference;

a processing means that contemporaneously receives the obtained real-time visual images, biometric data and transaction data, and determines identities of members of said group from the biometric data and transaction data, and determines common physical attributes of group members or common real-time behavioral activities performed by group members, or both, based on said received visual images, and extracting common personal characteristics based on the determined identities and, one or more determined physical attributes or real-time behavioral activities performed that are common among the group members; and, further,

a means is provided for associating the common personal characteristics information in real-time with products/services subject of a targeted advertisement.; and further,

a means is provided for ranking suitable products/services for advertisement according to the common personal characteristics; and

a means is provided for generating an optimized advertisement according to the ranking for communication to a communication device at the public location.

Thus, it is clear, that the present invention as set forth in amended Claims 1, 16 and 29 is much more comprehensive than Carney, whether taken alone or in combination with Lobo, as Carney just relies on a probable or statistically tracked determination of a demographic make-up of an audience (e.g., gender, marital status, etc.) based on a location of the displayed advertisement and/or a highly reliable determination of an audience's age demographic as taught by Lobo.

The present invention as now claimed relies additionally on biometric data received by members of the group and current or past transaction data as a result of current or past transactions performed by the members of the group to determine potential identities (and spending habits) of the group members in real-time. Thus, the common personal characteristics extracted in the present invention include the identities of group members obtained from the biometric sensing or

transaction data, and physical attributes of group members (e.g., women with red hair) and real-time behavioral activities performed by the group members (e.g., cigarette smoking), or both, as captured by visual images to determine a make-up of an audience in real-time. Potential advertisement for products, e.g., shampoo, cigarette brands are then associated with the common personal characteristics including determined identities, physical attributes and real-time behavioral activities and are ranked accordingly. The selecting means selects a product according to its rank for display in real-time.

In sum, Claims 1, 16 and 29 set forth an invention much more sensitive to a changing make-up of a group in a public location and receives and processes much more information that permits group advertisement optimization beyond that which could be achieved in Carney.

Respectfully, no new matter is being added by these amendments. For instance, dependent Claims 6-7, 21-22 and 34-35 directed to obtaining biometric data and behavioral characteristics, i.e., behavior activity data are being canceled and the subject matter thereof incorporated in base independent Claims 1, 16 and 29, respectively. Further, Claims 11, 26 and 39 directed to the ranking and selecting of suitable products/services for advertisement according to the common personal characteristics are being canceled and the subject matter thereof incorporated in base independent Claims 1, 16 and 29 respectively.

With respect to the rejection of Claims 6, 21 and 34, while the Examiner had indicated that Lobo teaches determining a make-up of an audience by biometrics, Lobo only suggests the means for categorizing human faces captured by an image according to age, e.g., for a demographic study. This is not the biometrics data as intended to be obtained by the present invention which contemplates use of devices that obtain a customer's fingerprints, eye (retinal ) scans, voice patterns, and the like, obtained for purposes of positive identification such as

described in the present specification at page 14, lines 1, et seq. Voice, detection, for example, enables female customers to be distinguished from male customers and adults from children, for example. In the case that biometrics are used for personal identification, a database of biometric information that indexes to person identities is implemented as performed by a user-identity data capture process 202 shown in Figure 3.

Moreover, information of a group member's current or past transaction data adds further data points used to optimize a targeted advertisement for the group of which that person is a member, such as described at page 20, line 22 – page 22, line 10 of the present specification explaining the classification and extraction components of the processing means.

Respectfully, the ranking means component of the processing is clearly explained on pages 26, line 14- page 27, line 22 in support of Figure 6 and again is neither taught nor suggested in Carney, whether taken alone or in combination with Lobo.

In view of the foregoing, Applicants respectfully request the Examiner to withdraw rejection of independent Claims 1, 16 and 29, and their respective dependent claims under 35 USC §103(a).

In summary, it is respectfully submitted that this application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance be issued. If the Examiner believes that a telephone conference with the Applicants'

attorneys would be advantageous to the disposition of this case, the Examiner is requested to telephone the undersigned.

Respectfully submitted,



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